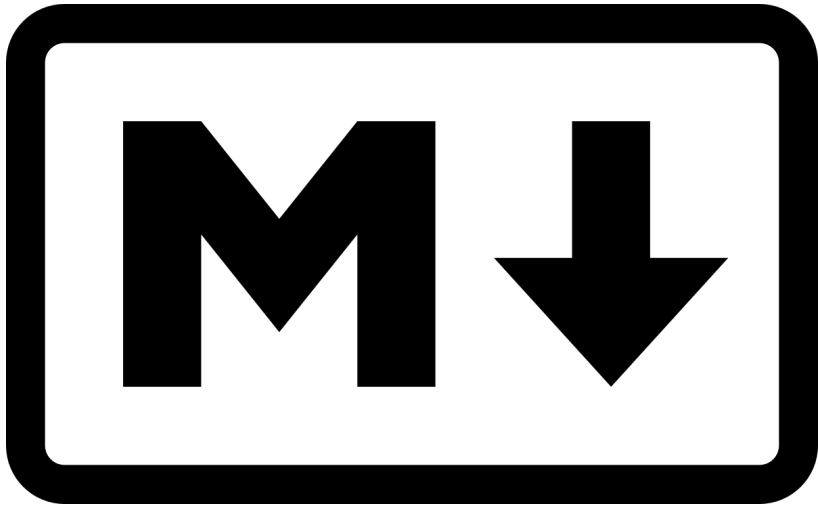


Markdown and applications

<https://forge.uclouvain.be/elic/learning.git>



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What is Markdown ?

Lightweight **markup language** (a *text-encoding system*)

"Set of symbols inserted in a text document to control its structure, formatting, or the relationship between its parts."

Others markup languages: HTML, LaTeX, etc

Created in 2004, **Markdown** is now one of the world's most popular markup languages

Markdown is different than using a WYSIWYG

Why Markdown ?

- Markdown is for **everything**: websites, documents, notes, books, presentations, email messages, technical documentation
- Markdown is **portable**
 - | MS Word locks your content into a proprietary file format
- Markdown is platform **independent**
- Markdown is **simple** and future proof
 - | so easy to learn (\neq LaTeX)
- Markdown is **everywhere** : Reddit, GitHub, readme, etc

Live Demo

Several online Markdown editors to try writing in Markdown

For example, try [StackEdit](#)

After you've become familiar with Markdown, you may want to use a Markdown application that can be installed on your computer

Prerequisites

- text editor : [Visual Studio Code](#)
- universal document converter : [Pandoc](#)
- TeX distribution : [LaTeX](#)
- Markdown presentation ecosystem : [Marp](#)

Visual Studio Code

VSC is one of the most popular and powerful text editors used by software engineers today

free and available for macOS, Windows and Linux

You didn't already install VS Code ?

Take a look in the `learning-git` folder in:
<https://forge.uclouvain.be/elic/learning.git>

Pandoc

Pandoc is a library for converting from one markup format to another, and a command-line tool that uses this library.

free and available for macOS, Windows, and Linux

- [Pandoc](#)
- [Pandoc-crossref](#)

```
cd ; git clone https://forge.uclouvain.be/elic/learning.git
cd learning/learning-markdown/
chmod 755 assets/install_all.bash
./assets/install_all.bash
exit
```

TeX distribution

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation.

free and available for [macOS](#), [Windows](#), and Linux

Marp

Marp (MarkDown slides extension) can convert **Marp Markdown** files into static HTML/CSS, PDF, PowerPoint document, and image(s) easily

Download and install marp-cli (a **CLI** interface for Marp) from the standalone binaries

free and [available](#) for macOS, Windows and Linux

VS Code nice extensions

Open VS Code and install the following extensions

- `Markdown All in One` : *v3.6.3 - Yu Zhang*
- `Marp for VS Code` : *v3.1.1 - Marp team*

And maybe :

- `Markdown Preview Enhanced` : *v0.8.18 - Yiyi Wang*
- `Markdownlint` : *v0.59.0 - David Anson*
- `Pandoc Markdown` : *v0.1.2 - rsolano*
- `Excel to Markdown table` : *v1.3.0 - Sebastian Holmqvist*

Markdown Basic Syntax

<https://www.markdownguide.org/basic-syntax/>

My first example: **README.md** on a Git web server

```
cd ~/learning/learning-markdown/example
```

How to convert it ?

```
pandoc -s README.md -o README.pdf
```

```
pandoc -s README.md -o README.docx
```

```
pandoc -s README.md -o README.html --metadata title="README for EcEARTH"
```

How to custom the target style ?

Using HTML template (html file and/or css)

```
pandoc -s README.md -o README.html --metadata title="README for EcEARTH" \
  --template=html_templates/easy_template.html --toc
```

don't forget to add `--toc` if you want a table of contents

you can also use the **VS Code Pandoc extension** to export/preview in HTML

Using Latex template (latex file)

```
pandoc -s README.md -o README.pdf --template tex_templates/eisvogel
```

My second example: a letter

Using my **UCLouvain letter** template (latex file)

```
pandoc -s letter.md -o letter.pdf --pdf-engine=xelatex --template tex_templates/letter
```

pdflatex and **xelatex** are two implementations for the same purpose. One of the main differences is that **xelatex** has better support for fonts: in particular you can use system fonts instead of only TeX fonts. It also has better support for non-latin character encodings.

Markdown Extended Syntax

<https://www.markdownguide.org/extended-syntax/>

A scientific report

```
pandoc -s report.md -o report.html --webtex -H html_templates/report.css \  
      --bibliography assets/MyLib.bib --citeproc  
  
pandoc -s report.md -o report.pdf --template tex_templates/eisvogel \  
      --bibliography assets/MyLib.bib --citeproc
```

don't forget to add `--webtex` if you want TeX formula in HTML

here we integrate a TeX bibliography

don't forget to add `--citeproc` if you want a list of references

Extended syntax example

```
pandoc -s advanced.md -o advanced.html --webtex -H html_templates/report.css --citeproc  
pandoc -s advanced.md -o advanced.pdf --template tex_templates/eisvogel --citeproc --lua-filter assets/columns.lua --listings
```

Compare the HTML output and the PDF output !

Some features are rendered only for PDF or HTML :

- depends on **CSS** or **HTML** template
- depends on **LaTeX** template

Markdown for slides

Replace `pandoc` command with `marp`

```
marp slides.md -o slides.pdf  
marp --bespoke.progress slides.md -o slides.html
```

don't forget to add `--bespoke.progress` if you want a progress status

Now you can take a look of the Markdown code of these **current slides** !

Markdown for a paper ?

Scientific manuscript for submission

```
pandoc -d article.yaml
```

Here, we use a `yaml` file to write all the pandoc options (passed with `-d`)

Scientific manuscript

```
pandoc -d nice_article.yaml
```

Conclusion

- You can learn Markdown very quickly
 - Markdown is directly human-readable so it's easy to share with people who don't have Markdown processor installed
 - Installing a Markdown processor is easy
 - Markdown is easily convertible to HTML
- best choice for documents to be published both on the web and as printed text
- You can create high-quality scientific documents

- Markdown is also good for quick note taking

you can effortlessly apply text formattings to, e.g., highlight parts in your notes or to create formatted lists

- The layout can be controlled by settings within the raw documents or you simply keep the default settings
- The design of your document guarantees a consistent and uniform layout
font types and sizes of text and headings, tables and directories, footnotes, page numbering, line spacing and borders, etc
- The file formats for writing the raw content in both languages (`*.md` , `*.tex`) are designated as **open format**